

A NEW SUBSPECIES OF FOX SPARROW FROM ALASKA

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Abstract.—*Passerella iliaca chilcatensis*, new subspecies, is described from the mainland of southeastern Alaska and adjacent Canada. The action represents a split of the well-known race *P. i. fuliginosa*, from which *P. i. chilcatensis* differs in being less reddish and duller in color and in having a shorter tail.

Swarth (1920) in his monograph on the Fox Sparrows and emendation of the range of *P. i. fuliginosa* (1922) intimated that the race might need subdivision. In earlier publications (Webster 1950, 1975) I, too, lumped the population of the mainland of southeastern Alaska and adjacent parts of Yukon and British Columbia with those of Vancouver Island and northwestern Washington. A similar arrangement was followed by Munro and Cowan (1947), the American Ornithologists' Union (1957), and Gabrielson and Lincoln (1959). In view of differences in color, size, and migration patterns, I now conclude that a formal description of what Swarth (1920) called "non-typical *fuliginosa*" is required.

Passerella iliaca chilcatensis, new subspecies

Holotype.—California Academy of Sciences #70787, collected 12 Jun 1981 by J. Dan Webster, 7 miles (airline) south-southwest of Klukwan, Alaska, near Tsirku River, about 250 m elevation, in alder-willow thicket near large cottonwood trees. Little body fat; 37.8 g, male, cloacal protuberance large, testes 13 and 10 mm long; adult skull.

Subspecific characters.—Blacker, less reddish than *P. i. townsendi*, both dorsally and on ventral spots; less reddish, more sepia (or yellowish), duller than *P. i. fuliginosa*, but equally dark or blackish both dorsally and on ventral spots, and with shorter tail. Dorsum of fresh-plumaged birds nearest fuscous, though slightly more olivaceous than that; compared directly with Smithe (1975).

Breeding range.—Chilkat River area of British Columbia and Alaska southeast along the mainland to the Tewart area of British Columbia. Precise localities, including those of intergradient populations, are listed below. Thickets, mostly of alder bushes but sometimes mixed with small spruces or willows, comprise the breeding habitat. These are mostly near timberline, but also occur in logging clearings, avalanche rubble, river margins, down even to sea level.

Winter range.—Most specimens I examined were from the coast of Oregon (Tillamook) and northern California south to San Francisco. However, one specimen had been taken in Alaska—Craig, Prince of Wales Island, 5 Jan 1920; and one on Puget Sound, Washington, 10 Jan 1912. Also, specimens intermediate between *chilcatensis* and one or another of the adjacent breeding races were examined. These had been taken in winter (Dec-Feb) in south coastal British Columbia and south to Tulare County, California. Swarth (1920) examined specimens of "non-typical *fuliginosa*" from the coastal counties of northern California

Table 1.—*Passerella iliaca*. Length of wing. Males, breeding populations.

Subspecies	n	r	M	SD	CV
<i>P. i. chilcatensis</i>	51	76–86	80.235	2.08	2.59
<i>P. i. fuliginosa</i>	14	79–85	82.357	1.99	2.41
<i>P. i. altivagans</i>	19	77–85	82.053	2.19	2.67
<i>P. i. zaboria</i>	50	81–92	87.220	1.65	1.89
<i>P. i. annectens</i>	12	78–86	82.583	2.26	2.74
<i>P. i. townsendi</i>	70	75–86	80.814	2.38	2.94

south to the San Francisco Bay region, plus single specimens from San Luis Obispo and San Bernardino counties farther south. Grinnell and Miller (1944), although stating that the winter range in California was concentrated in the humid northwest, cited additional specimens from Monterey, Los Angeles, Siskiyou, Shasta, and Lassen counties. It is notable that the winter range of *fuliginosa* (sensu stricto) is confined to British Columbia and Washington.

Measurements.—Tables 1–4 give a comparison of the new race with adjacent races. Wing chord, tail, and exposed culmen were measured in standard fashion, but depth of bill by Swarth's method (1920:83). Only adult male specimens taken 10 May to 8 Aug were included in the tables. In summary, *chilcatensis* differs significantly in size from adjacent races only on these points: *zaboria* has a longer wing and shorter bill; *fuliginosa* has a longer tail. While *annectens* has a deeper bill, the difference is not significant. Within the samples of the races *chilcatensis* and *townsendi* (as classified in the tables of measurements), some specimens from geographically marginal areas showed intermediacy of color characters.

Discussion.—I have listed (Tables 1–4) five races as breeding adjacent to *chilcatensis*—*annectens* to the northwest, *townsendi* to the west, *zaboria* to the northeast, *altivagans* to the east and southeast, and *fuliginosa* to the south. However, there is certainly a possibility of contact between *chilcatensis* and *olivacea* somewhere in the coast range of British Columbia, as suggested by a few winter specimens (cf. Phillips 1964).

In view of the finding by Zink (1982) of slight but significant size differences in a California deme of *Passerella iliaca* in samples separated by 54 years of time, the size differences reported herein must be viewed with caution. This caution applies especially to the race *annectens*, in which 10 of the 12 male specimens I examined were collected 90 years ago, whereas for the other races a high proportion

Table 2.—*Passerella iliaca*. Length of tail. Males, breeding populations.

Subspecies	n	r	M	SD	CV
<i>P. i. chilcatensis</i>	49	62–75	69.306	2.53	3.66
<i>P. i. fuliginosa</i>	14	70–81	75.143	2.42	3.22
<i>P. i. altivagans</i>	18	68–72	73.556	4.21	5.72
<i>P. i. zaboria</i>	50	67–76	71.420	2.11	2.95
<i>P. i. annectens</i>	12	67–73	70.250	1.88	2.67
<i>P. i. townsendi</i>	69	65–78	71.072	2.75	3.87

Table 3.—*Passerella iliaca*. Length of culmen. Males, breeding populations.

Subspecies	n	r	M	SD	CV
<i>P. i. chilcatensis</i>	51	11.0–13.5	12.249	0.54	4.45
<i>P. i. fuliginosa</i>	14	11.1–13.0	12.221	0.56	4.55
<i>P. i. altivagans</i>	19	11.0–12.5	11.674	0.42	3.60
<i>P. i. zaboria</i>	48	10.0–12.3	11.308	0.55	4.87
<i>P. i. annectens</i>	12	11.0–11.9	11.600	0.28	2.44
<i>P. i. townsendi</i>	69	10.1–13.2	11.990	0.64	5.36

were collected within the last 20 years. Gabrielson and Lincoln (1951) commented on “foxing” in Alaskan Fox Sparrow specimens; I concur that postmortem changes in color, mostly from black towards red, are considerable. Comparisons of specimens for color were made only with specimens of approximately the same museum age.

According to Gabrielson and Lincoln (1959) and earlier workers, the Fox Sparrow does not breed on the southern islands of the Alexander Archipelago of Southeastern Alaska except for Wrangell and Forrester islands. However, I noted two singing birds near Ketchikan, Revillagigedo Island, 9 Jun 1977, and about 25 in logging clearcuts on Prince of Wales Island, 9–24 Jun 1977. While I found no nests in the latter area, I collected nine adults (of *townsendi*) in breeding condition. (The one female had a prominent brood patch and had recently laid an egg.) It is probable that the species did breed on these islands prior to the onset of major logging operations 20 years ago, but only in small numbers and at high elevations near timberline. The few observers before 1959 (see reports by Bailey, Swarth and Willett, as cited by Gabrielson and Lincoln 1959) spent little or no time at high elevations during summers. On 22 Jun 1977 my assistant, Keith Gehring, climbed a high ridge above the logging clearcut in the valley of Beaver Creek, Prince of Wales Island. He saw one singing Fox Sparrow at an elevation of about 2000 feet. Apparently, the recent clearcut logging operations on Prince of Wales and Revillagigedo islands, as on the mainland near Haines and Hyder, have allowed a great population expansion of the Fox Sparrow. Near Haines, I found the race *chilcatensis* breeding in considerable numbers (three nests found) in timberline alder thickets at several locations in Jun and Jul 1972, 1975 and 1981 (cf. Webster 1975). Banks (1970) reported expansion of range of two other subspecies of *Passerella iliaca* in Oregon after clearcut logging.

Table 4.—*Passerella iliaca*. Depth of bill. Males, breeding populations.

Subspecies	n	r	M	SD	CV
<i>P. i. chilcatensis</i>	51	7.8–9.6	8.745	0.48	5.45
<i>P. i. fuliginosa</i>	13	8.5–9.9	9.031	0.43	4.80
<i>P. i. altivagans</i>	19	8.5–9.5	9.021	0.28	3.08
<i>P. i. zaboria</i>	48	8.4–9.8	9.100	0.33	3.62
<i>P. i. annectens</i>	12	8.2–10.1	9.233	0.54	5.84
<i>P. i. townsendi</i>	69	8.0–9.7	8.809	0.40	4.55

Breeding season specimens examined.—(If a locality is marked †, specimens from there are intermediate toward the adjacent race.) *Passerella iliaca chilcatisensis*: ALASKA 37—7 miles SSW Klukwan; 8 miles SSW Klukwan, on Porcupine Mountain; 4–5 miles W Klukwan, near Klehini River; Four Winds Mountain, above Mosquito Lake; Chilkat Mountain; Glacier Station, on White Pass railroad; Mountains above Juneau; 7–8 miles up (=NE) Stikine River from Point Rothsay; Berg Creek, 15 miles ESE Wrangell; 4 miles NW Hyder. YUKON 6—miles 97–98 Haines Highway†. BRITISH COLUMBIA 38—near Bear Glacier, 15 miles NE of Stewart; Snowbank Pass, 47 miles NW Meziadin Junction; 24 miles S Kinaskan Lake, near Iskut River; miles 46–56 Haines Highway, Rainy Hollow; mile 85 Haines Highway†; Doch-da-on Creek; Flood Glacier; Great Glacier, on Stikine River.

Passerella i. annectens: ALASKA 17—Yakutat; Situk River; Osier Island.

Passerella i. zaboria: ALASKA 33—Many localities in N and W Alaska; Lower Tonsina; Chistochina. YUKON 24—Several localities in N and central Yukon; Tagish†. BRITISH COLUMBIA 5—Dease Lake; Atlin. NORTHWEST TERRITORIES 1—Niultin Lake. MANITOBA 5—Churchill†.

Passerella i. townsendi: ALASKA 60—Glacier Bay†; Lemesurier Island; Chichagof Island; Admiralty Island; St. Lazaria Island; Baranof Island; Wrangell Island†; Forrester Island; Prince of Wales Island. BRITISH COLUMBIA 41—Queen Charlotte islands; Goose Island; Bella Coola.

Passerella i. altivagans: BRITISH COLUMBIA 37—Nine-mile Mountain; Hudson Bay Mountain; Mount Cronin; Driftwood Mountains; Parsnip River; Williams Lake; above Stui; Mount Revelstoke; Glacier National Park.

Passerella i. fuliginosa: BRITISH COLUMBIA 16—Several localities on Vancouver Island; Triangle Island; Alert Bay. WASHINGTON 3—Tatoosh Island; Neah Bay; La Push.

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